Women, Minorities, and Persons with Disabilities in Science and Engineering 2015

National Center for Science and Engineering Statistics
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

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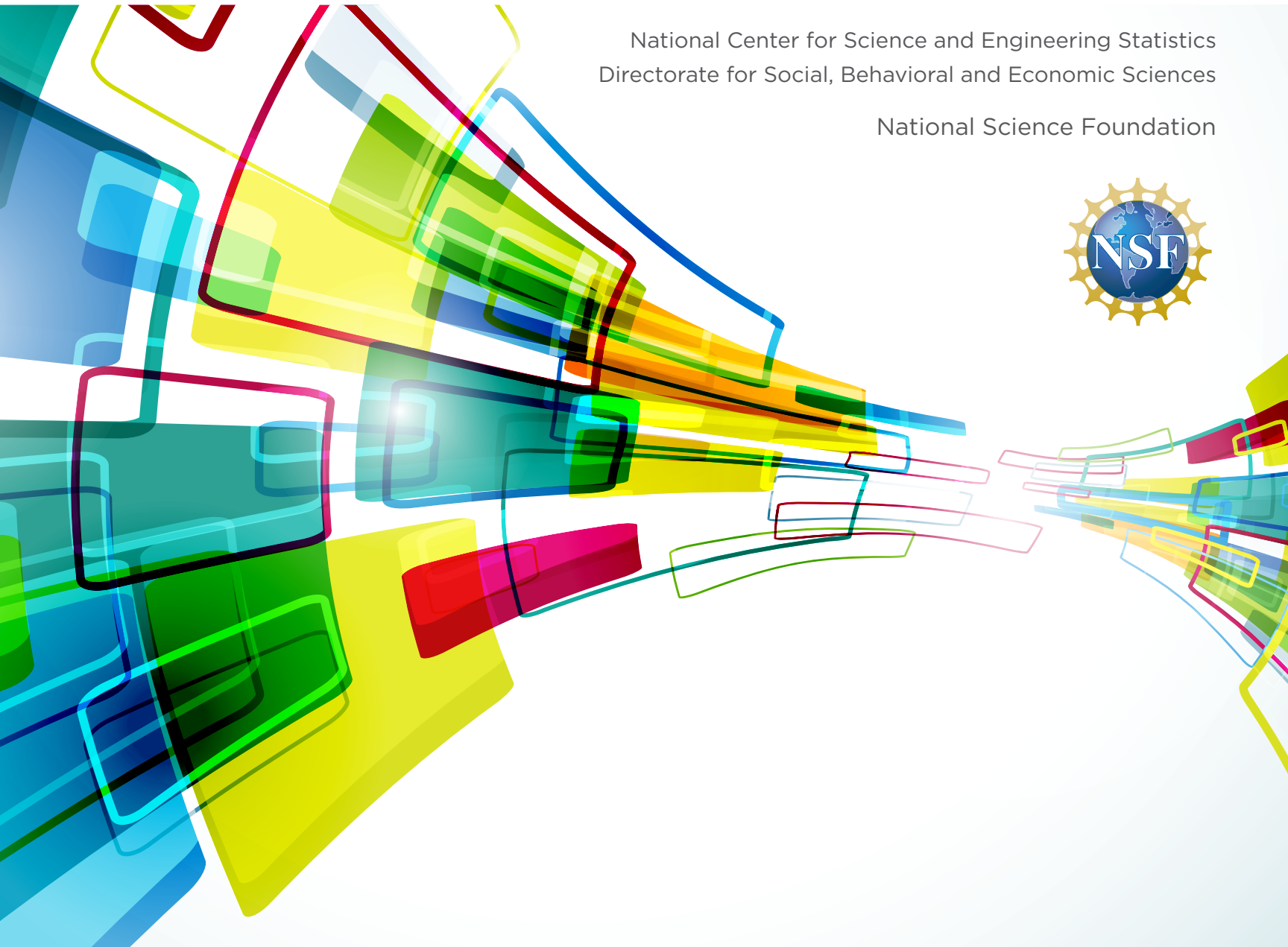


About this report

Women, Minorities, and Persons with Disabilities in Science and Engineering provides statistical information about the participation of these three groups in science and engineering education and employment. Its primary purpose is to serve as an information source. It offers no endorsement of or recommendations about policies or programs. National Science Foundation reporting on this topic is mandated by the Science and Engineering Equal Opportunities Act (Public Law 96-516).

This digest highlights key statistics drawn from a wide variety of data sources. Data and figures in this digest are organized into topical areas—enrollment, field of degree, occupation, employment status, and academic employment.

Surveys conducted by the National Center for Science and Engineering Statistics (NCSES) at the National Science Foundation provided a large portion of the data used in this report. NCSES has a central role in the collection, interpretation, analysis, and dissemination of objective data on the science and engineering enterprise.

Online

Online, the reader is invited to explore trends in greater depth through detailed data tables and interactive graphics (www.nsf.gov/statistics/wmpd/). Technical notes and other online resources are provided to aid in interpreting the data. The data tables are available both as PDF and Excel files for easy viewing, printing, and downloading.

Table of contents

Introduction

The representation of certain groups of people in science and engineering (S&E) education and employment differs from their representation in the U.S. population. Women, persons with disabilities, and three racial and ethnic groups—blacks, Hispanics, and American Indians or Alaska Natives—are considered underrepresented in S&E. They constitute disproportionally smaller percentages of S&E degree recipients and of employed scientists and engineers than they do of the U.S. population. Although Asians are also a minority group, they are considered to be overrepresented among S&E degree recipients and employed scientists and engineers.

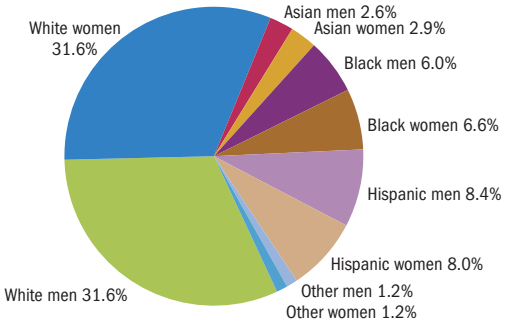
Underrepresentation and overrepresentation of women and racial or ethnic groups vary by field of study or occupation. Differences in the representation of these groups are rooted in differences in current and historic participation in S&E higher education and differences in educational attainment and in precollege course taking and achievement.

Women and underrepresented minorities constituted a substantial portion of the U.S. population ages 18–64 in 2012 (figure A). Women were about 50% of this population; Hispanics, 16%; blacks, 13%; Asians, 6%; and other racial and ethnic groups combined (American Indians or Alaska Natives, Native Hawaiians or Other Pacific Islanders, and individuals who report more than one race and are not Hispanic), 2%. According to the latest Census Bureau projections, minorities will account for 57% of the U.S. population by 2060. The largest growth is projected in the numbers of Hispanics, Asians, and persons of multiple races. Despite increasing numbers, the proportion of blacks is projected to grow only 1 percentage point by 2060.

Hispanic women were the largest group of minority women ages 18–64 in the United States in 2012, constituting 8% of the overall population in this age group.

A

Noninstitutionalized resident population of the United States ages 18–64, by race, ethnicity, and sex: 2012



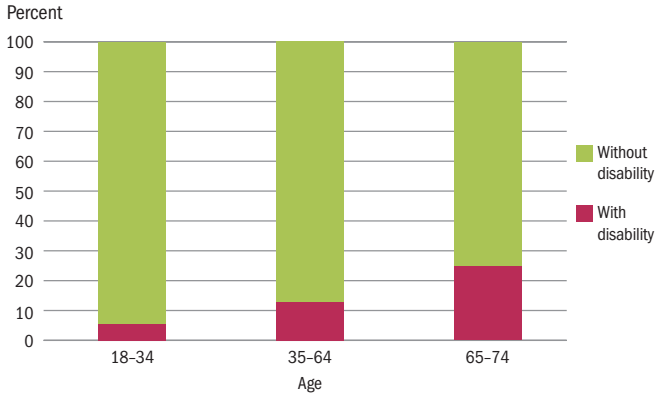
NOTES: Hispanic may be any race. Other includes individuals not of Hispanic ethnicity who reported more than one race or a race not listed separately.

Black women constituted 7% of this population; Asian women, 3%; women of all other minority racial and ethnic groups combined, 1%; and white women, 32%.

Estimates of the proportion of the population with disabilities vary depending on the definition of the term "disability." According to the Census Bureau's 2012 American Community Survey, 12% of the U.S. population has some disability (figure B). Disabilities do not necessarily limit a person's ability to participate in educational experiences or be productive in an occupation. Persons with disabilities may or may not require special accommodation to enable them to succeed in school or at work.

B

U.S. civilian noninstitutionalized population ages 18–74, by disability status: 2012



1 Enrollment

Recent trends in undergraduate enrollment reflect the increasing diversity of the U.S. college-age population, as Asian and Hispanic shares of the population grow. Most notably, underrepresented minorities, Hispanics in particular, are an increasing fraction of undergraduate students, and whites are a decreasing fraction. In all racial and ethnic groups, more women than men enroll in college.

Undergraduate enrollment

Type of school

Hispanics and American Indian or Alaska Natives are more likely than any other racial or ethnic group to enroll in public 2-year colleges. Blacks are more likely than other racial or ethnic groups to enroll in private for-profit academic institutions. Whites and Asians are more likely to enroll in 4-year public institutions and private nonprofit institutions (figure A). In each racial and ethnic group, women and men tend to enroll in similar types of schools.

Full-time study

Full-time enrollment is higher in 4-year institutions than in 2-year institutions. At 2-year institutions, white and Asian women are less likely than their male counterparts to enroll full time. Underrepresented minorities are less likely than whites and Asians to enroll full time at 4-year institutions (figure B).

Minority-serving institutions

Many underrepresented minority undergraduates are the first in their family to go to college, and minority-serving academic institutions enroll a substantial fraction of them. However, the percentage of blacks earning science and engineering (S&E) bachelor's degrees from historically black colleges or universities and the percentage of Hispanics earning S&E bachelor's degrees from high-Hispanic-enrollment institutions have both declined over time. Tribal colleges, which mainly offer 2-year degrees, account for a small percentage of S&E bachelor's degrees to American Indians (figure C).

Baccalaureate origins of black doctorate recipients

Black S&E doctorate recipients from U.S. universities complete their undergraduate degrees at many kinds of institutions. Nearly 30% earned a bachelor's degree from an HBCU, one of the most common types of baccalaureate institutions for black S&E doctorate recipients. HBCUs are especially important baccalaureate-origin institutions of black doctorate recipients in agricultural sciences, physical sciences, biological sciences, and mathematics (figure D).

Students with disabilities

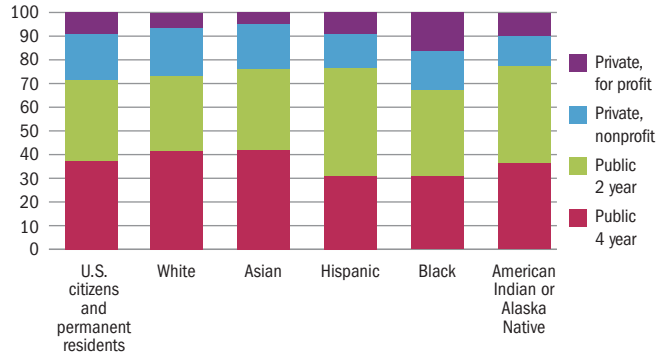
In 2012, about 11% of undergraduate students reported a disability. Undergraduates with disabilities are older than those without disabilities and are slightly more likely to attend a 2-year institution (figure E).

In addition, nearly one in four undergraduates with a disability enrolls in an S&E field, a proportion that is similar to those without disabilities. Undergraduates with disabilities are as likely as those without a disability to receive financial aid.

About 7% of graduate students reported a disability in 2012. Graduate students with disabilities are as likely as those without disabilities to enroll in an S&E field (about 20%).

A

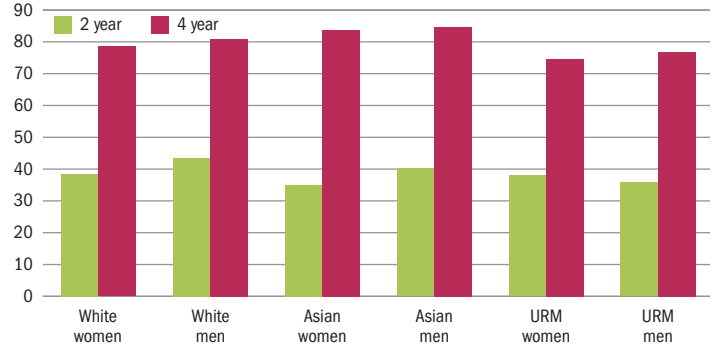
Undergraduate enrollment by type of school: 2012



NOTE: Hispanic may be any race.

B

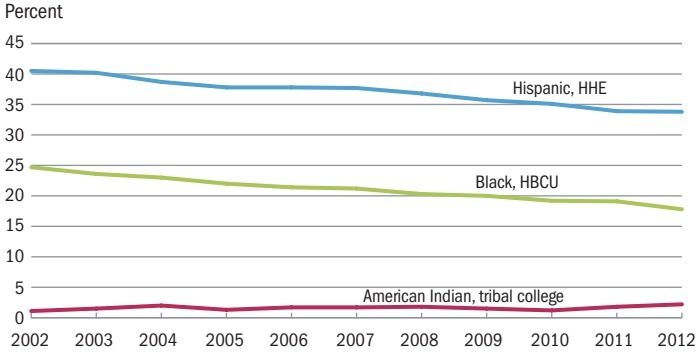
Full-time enrollment among undergraduates, by institution type: 2012



URM = underrepresented minority.

C

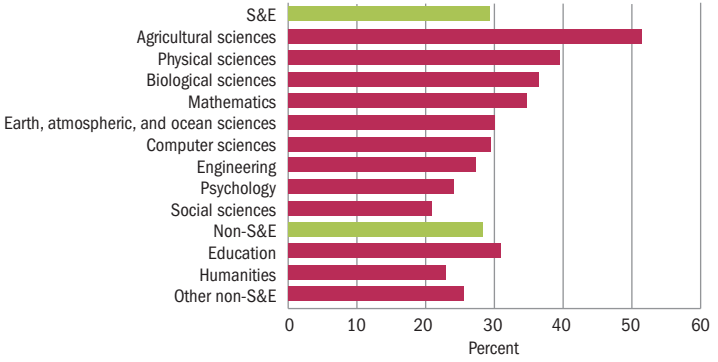
Minorities earning science and engineering bachelor's degrees at minority-serving institutions, by institution type: 2002–12



HBCU = historically black college or university; HHE = high-Hispanic-enrollment institution.

D

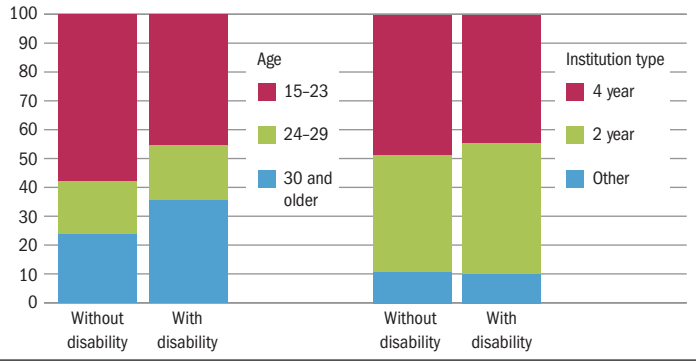
Black doctorate recipients with HBCU baccalaureate origins, by field: 2008–12, aggregate



HBCU = historically black college or university.

E

Disability status of undergraduate students, by age and institution type: 2012



2 Field of degree: Women

Women have earned 57% of all bachelor's degrees and about half of all science and engineering (S&E) bachelor's degrees since the late 1990s. However, women's level of participation in S&E fields varies, and within fields it tends to be consistent over every degree level. In most fields, the proportion of degrees awarded to women has risen since 1993. The proportion of women is lowest in engineering, computer sciences, and physics. Women earn about one-third of the doctorates in economics and slightly more than one-fourth of doctorates in mathematics and statistics.

Psychology, biosciences, and social sciences

Women's participation in S&E fields is highest in psychology, where women account for 70% or more of the graduates at each degree level. Women's participation is also relatively high in biosciences and social sciences (except for economics). Since 1993, the proportion of women in biosciences and social sciences has increased to between 49% and 58%, depending on the field and degree level (figure A).

Engineering

Although the number of women earning degrees in engineering has increased in the past 20 years, women's participation remains well below that of men at all degree levels and in all fine fields of engineering. Since 1993, the proportion of women in engineering has increased at all degree levels, but mostly at the master's and doctoral levels (figure B). In general, women earn larger proportions of degrees in chemical, materials, industrial, and civil engineering than in aerospace, electrical, and mechanical engineering.

Computer sciences

The proportion of women in computer sciences is highest at the master's level. Since 1993, the number of women in computer sciences has risen at all degree levels. Although the proportion of women with degrees in computer sciences has increased considerably at the doctoral level, it has declined at the bachelor's level (figure C).

Mathematics and statistics

Women's share of degrees in mathematics and statistics remains below that of men, particularly at the doctoral level. Women's representation in mathematics and statistics is higher at the bachelor's and master's levels, reaching approximately 40%—about double that of women in engineering and computer sciences at all degree levels. Despite increases in the numbers of women earning degrees in mathematics and statistics since 2002, the proportion of women has declined, particularly at the bachelor's level (figure D).

Physics

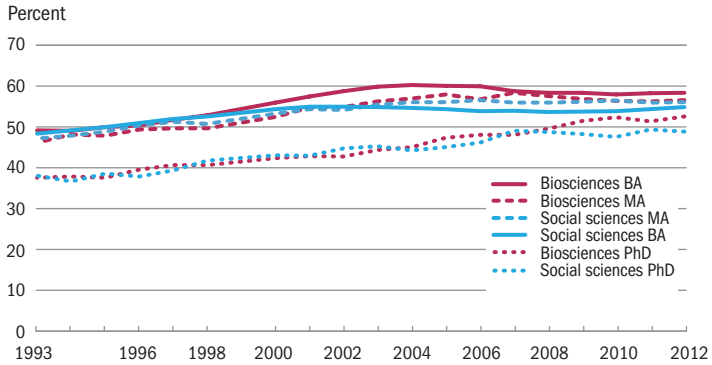
Despite increases in the number of women earning degrees in physics, the proportion of women in this field, averaging about 20% across all degree levels, is the lowest of all the physical sciences. In the past 20 years, the proportion of women earning degrees in physics increased more at the doctoral level than at the bachelor's and master's levels, but the numbers of women in this field remain very small (figure E).

Economics

Within the social sciences, women's participation is lowest in economics. In the past two decades, the number of women earning degrees in economics has increased at all degree levels. Despite the increase in numbers, over the past decade the proportion of degrees in economics awarded to women declined at the bachelor's level and remained flat at the master's level. Women's share of degrees in economics increased at the doctoral level (figure F).

A

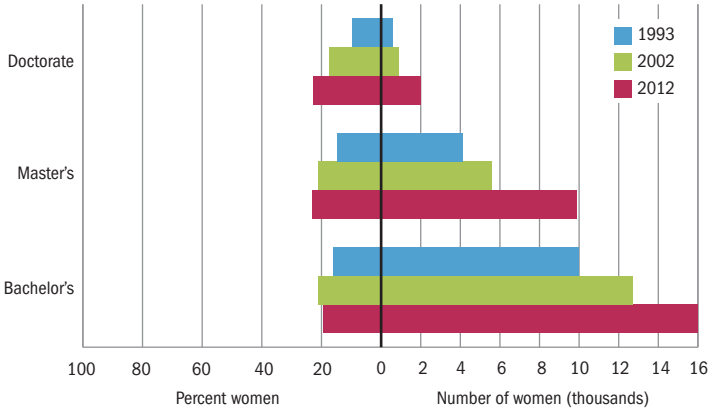
High participation fields for women: Biosciences and social sciences, 1993–2012



NOTE: Data not available for 1999.

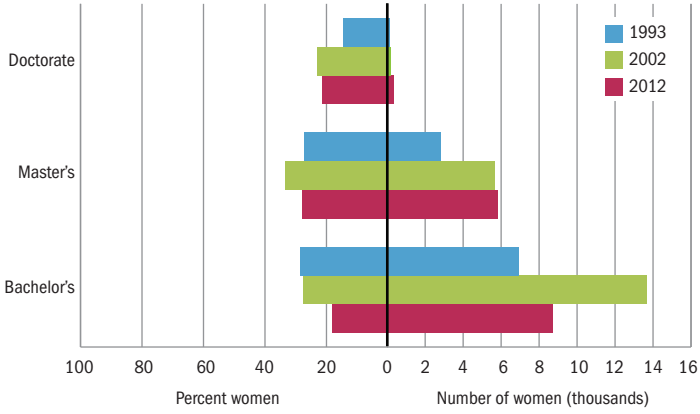
B

Low participation field for women: Engineering, 1993, 2002, 2012



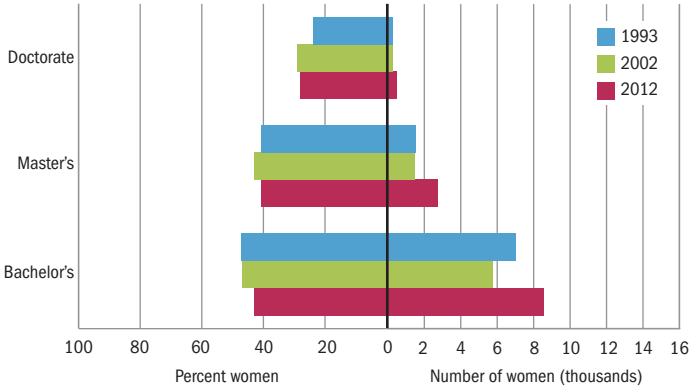
C

Low participation field for women: Computer sciences, 1993, 2002, 2012



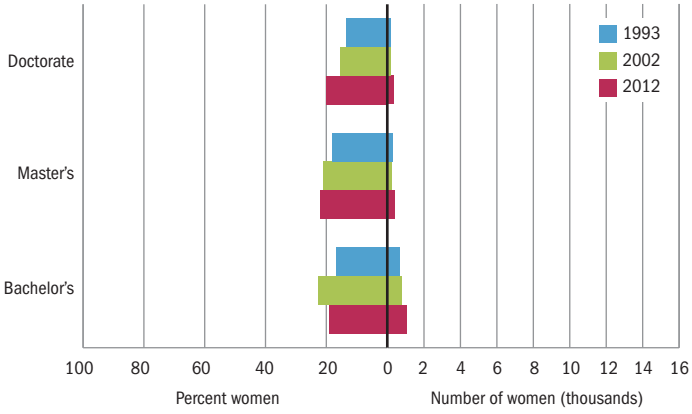
D

Low participation field for women: Mathematics and statistics, 1993, 2002, 2012



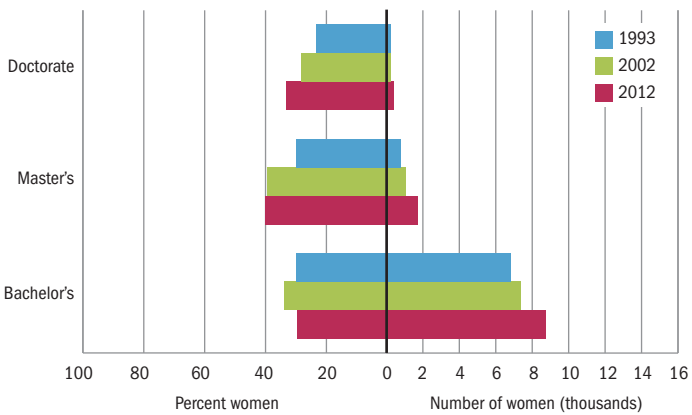
E

Low participation field for women: Physics, 1993, 2002, 2012



F

Low participation field for women: Economics, 1993, 2002, 2012



3 Field of degree: Minorities

Despite considerable progress over the past two decades, the gap in educational attainment separating underrepresented minorities from whites and Asians remains wide. In general, underrepresented minorities are less likely than whites and Asians to graduate from high school, enroll in college, and earn a college degree. Among underrepresented minorities who do graduate from college, the overall degree patterns are similar to those of whites. Asians are more likely than whites and underrepresented minorities to earn a college degree in a science and engineering (S&E) field. Although whites' share of S&E degrees has declined over the past 2 decades, they continue to earn a majority of degrees in all broad S&E fields.

Degrees earned by underrepresented minorities

Overall

In 2012, nearly one in six adults with a bachelor's degree or higher was a member of an underrepresented minority group. Underrepresented minorities, like whites, earn a higher share of non-S&E degrees than of S&E degrees, particularly at the master's and doctoral levels. Underrepresented minorities' share of S&E bachelor's and master's degrees has been rising since 1993, but their share of doctorates in these fields has flattened at about 7% for the past 10 years (figure A).

Bachelor's degrees in science and engineering

Since 1993, the greatest increases in the share of S&E bachelor's degrees earned by underrepresented minorities have been in psychology, the social sciences, computer sciences, and biological sciences. Since 2000, underrepresented minorities' shares in engineering and in physical sciences have been flat, and their share in mathematics and statistics has dropped (figure B).

Degrees earned by Asians

Overall

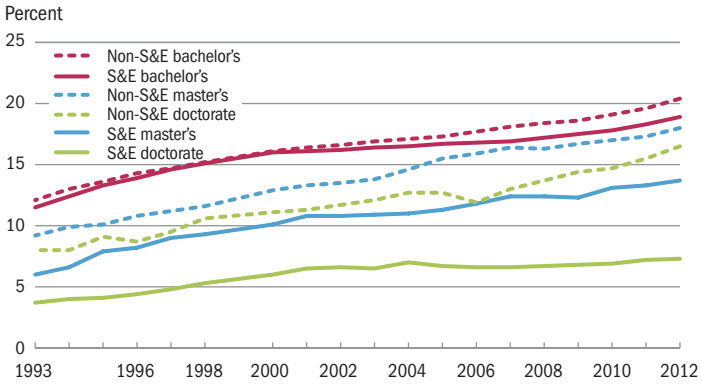
Asians earn a roughly similar share of all S&E degrees at the master's and doctoral degree levels and a slightly higher share at the bachelor's degree level. Unlike underrepresented minorities and whites, Asians earn a higher proportion of S&E degrees than of non-S&E degrees at all degree levels. The proportion of Asians earning S&E degrees rose in the 1990s but has been relatively steady over the past decade (figure C).

Bachelor's degrees in science and engineering

Although Asians' share of S&E degrees has been steady over the past decade, major shifts by field have occurred in bachelor's degrees: most pronounced are a drop in computer sciences and increases in the physical and biological sciences. Asians' share in the other S&E fields has been fairly stable in the past 10 years (figure D).

A

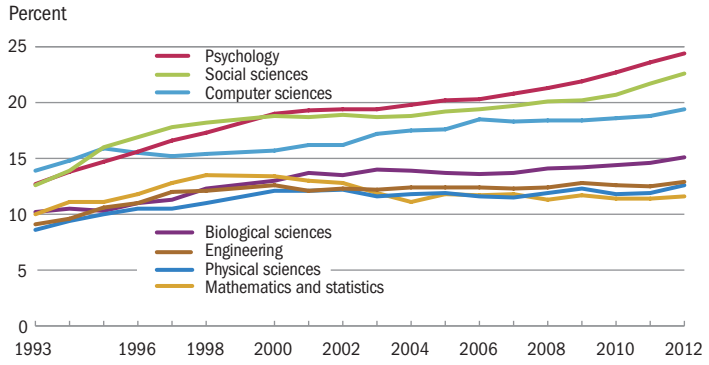
Degrees earned by underrepresented minorities: 1993–2012



NOTE: Data not available for 1999.

B

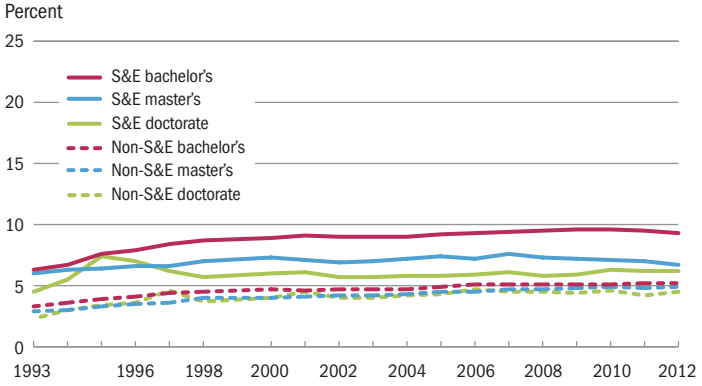
Science and engineering bachelor's degrees earned by underrepresented minorities, by field: 1993–2012



NOTE: Data not available for 1999.

C

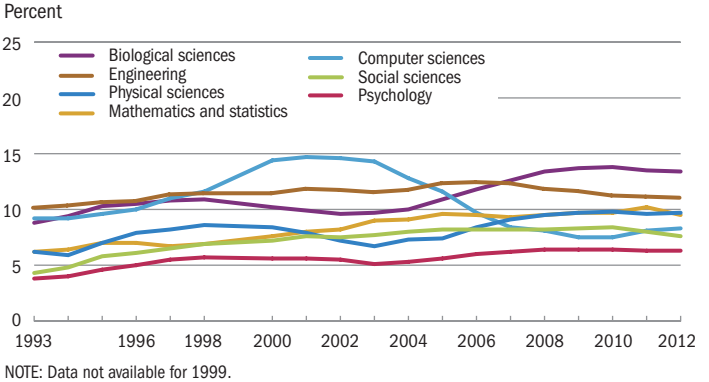
Degrees earned by Asians: 1993–2012



NOTE: Data not available for 1999.

D

Science and engineering bachelor's degrees earned by Asians, by field: 1993–2012



NOTE: Data not available for 1999.

4 Field of degree: Women, men, and racial and ethnic groups

In 2012, underrepresented minority women earned more than half of the science and engineering (S&E) degrees awarded to their respective racial and ethnic groups. White and Asian women earned nearly half of the S&E degrees awarded to their respective racial and ethnic groups. In most S&E fields of study, the share of bachelor's degrees earned by underrepresented minority women is larger than their shares of master's or doctoral degrees.

Differences between women and men

Underrepresented minorities

Underrepresented minority women earn a higher share of S&E degrees than do underrepresented minority men at all degree levels, especially at the bachelor's level. In the past 20 years, the proportion of women nearly doubled at the bachelor's degree level and more than doubled at the master's and doctoral degree levels. The proportion of underrepresented minority women earning S&E degrees grew faster in the 1990s than in the past decade (figure A).

Whites

In contrast to underrepresented minorities, among whites, women earn a lower proportion of S&E degrees than do men at all degree levels. The gap is largest at the doctoral level. In 2012, white women earned 19% and white men earned 24% of all S&E doctorates (figure B).

Asians

Among Asians, women and men earn similar proportions of S&E degrees. At the doctoral level, the proportion of S&E degrees earned by Asian women has more than doubled since 1993, reaching the same level as the proportion earned by Asian men in 2012 (figure C).

Bachelor's degrees

Underrepresented minority women

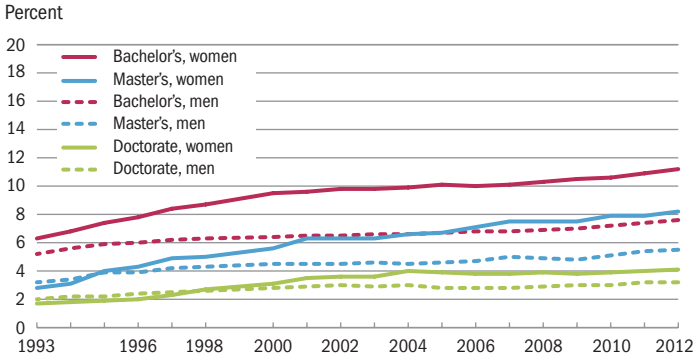
Underrepresented minority women earn higher proportions of bachelor's degrees in psychology and social sciences than in any other S&E field. The proportion of bachelor's degrees they earn in psychology and social sciences has increased rapidly since 1993; there has been more modest growth in the proportion of bachelor's degrees earned in biological sciences and physical sciences. The proportion of bachelor's degrees this group earns in mathematics and engineering has remained fairly stable, and in the case of computer sciences, the proportion has declined (figure D).

Asian women

Compared with Asian men, Asian women are more likely to earn bachelor's degrees in biological sciences and less likely to earn bachelor's degrees in computer sciences and engineering. Since 1993, the share of degrees awarded to Asian women has approximately doubled in biological, physical, and social sciences. In computer sciences, their share of degrees was lower in 2012 than it was in 1993 (figure E).

A

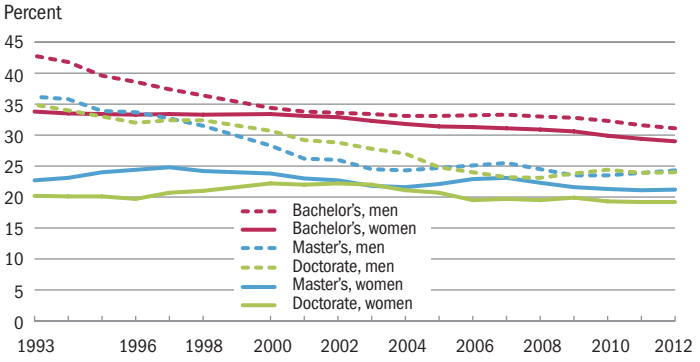
Science and engineering degrees earned by underrepresented minority women and men: 1993–2012



NOTE: Data not available for 1999.

B

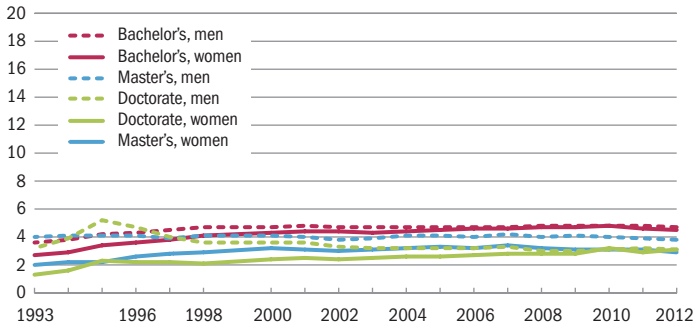
Science and engineering degrees earned by white women and men: 1993–2012



NOTE: Data not available for 1999.

C

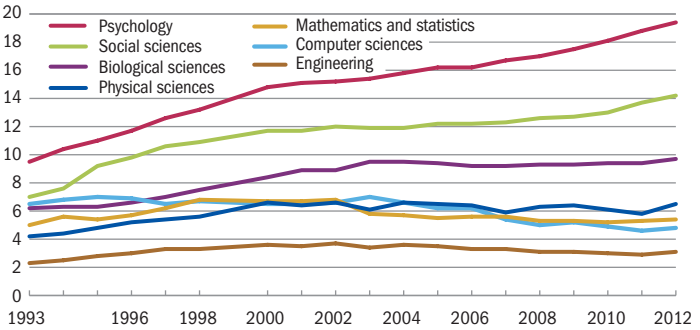
Science and engineering degrees earned by Asian women and men: 1993–2012



NOTE: Data not available for 1999.

D

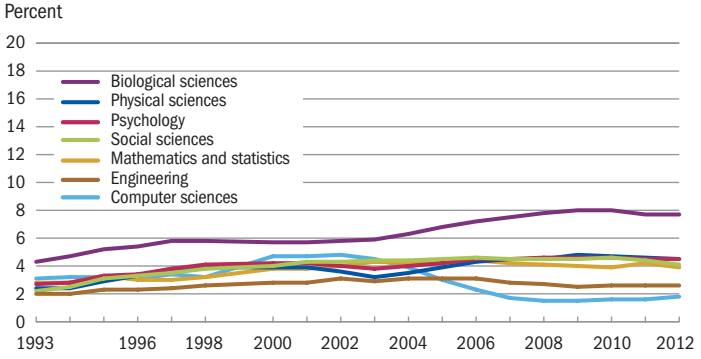
Science and engineering bachelor's degrees earned by underrepresented minority women, by field: 1993–2012



NOTE: Data not available for 1999.

E

Science and engineering bachelor's degrees earned by Asian women, by field: 1993–2012



NOTE: Data not available for 1999.

5 Occupation

The science and engineering (S&E) workforce is composed largely of people who earned S&E degrees over roughly four decades. Because older cohorts of S&E workers are disproportionately white and male, women and minorities constitute a smaller percentage of the overall S&E workforce than of degree recipients who recently joined the workforce. Persons with disabilities are also underrepresented in the S&E workforce, compared with the college-educated population as a whole. Disability can occur throughout one's life. Disabilities acquired at birth or at an early age may influence decisions to pursue S&E studies; those acquired at later ages may influence opportunities to continue or seek employment.

Overall trends

White men constitute about one-half of the S&E workforce. In all racial and ethnic groups, more men than women work in S&E occupations. Together, Asian and underrepresented minority women represent about 1 in 10 persons employed in S&E occupations (figure A).

Women

Women's participation in the S&E workforce varies greatly by occupation. Women are more likely than men to be employed as psychologists or as technologists and technicians in the life sciences. Although women are more likely than men to work in a health-related occupation, they are less likely to work as a diagnosing health practitioner, such as a physician, surgeon, or dentist (figure B).

Race and ethnicity

Blacks

The proportion of blacks in S&E occupations is lower than their proportion in the U.S. workforce as a whole (11%). Blacks are more likely to be employed in non-S&E occupations (e.g., social workers; counselors; or personnel, training, and labor relations specialists) than in S&E occupations (e.g., life scientist, physical scientist, or engineer). Within the S&E workforce, blacks are more likely to be employed in S&E-related occupations than in S&E. The share of blacks employed as computer and math scientists is similar to the share of blacks in the S&E workforce. Blacks constitute a relatively large share of computer system analysts (figure C).

Hispanics

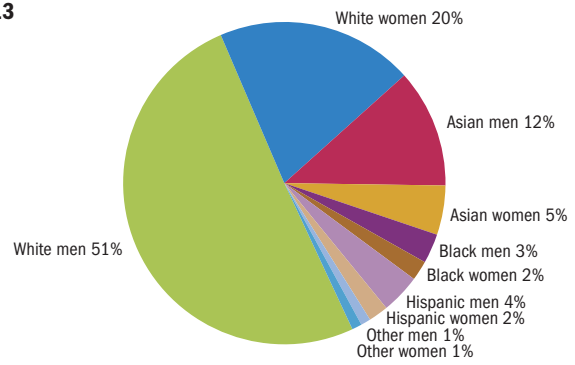
Like blacks, Hispanics are a smaller proportion of workers in S&E occupations than of the U.S. workforce as a whole (16%). Within the S&E workforce, Hispanics are more likely to be employed in S&E-related occupations than in S&E. Hispanics constitute larger shares of those employed as counselors or as health technologists and technicians than they do of computer and math scientists and physical and related scientists. Within engineering, Hispanics are a larger proportion of petroleum engineers than of most other engineering occupations (figure D).

Age at onset of disability

About one-half of persons with a disability employed in the S&E workforce say that they became disabled at age 40 or older; of these, the majority became disabled between ages 50 and 75. Only about 7% of those with disabilities had been disabled at birth (figure E).

A

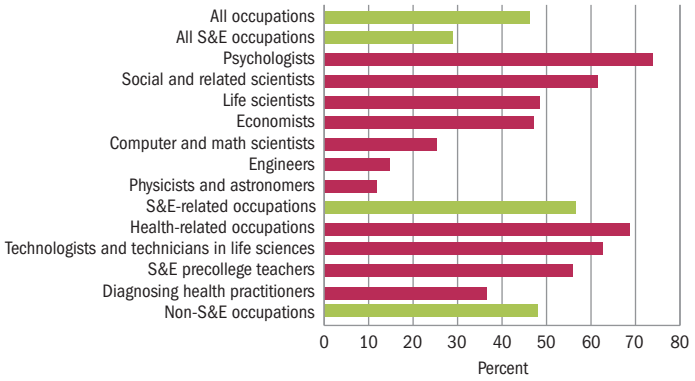
Scientists and engineers working in science and engineering occupations: 2013



NOTE: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple race.

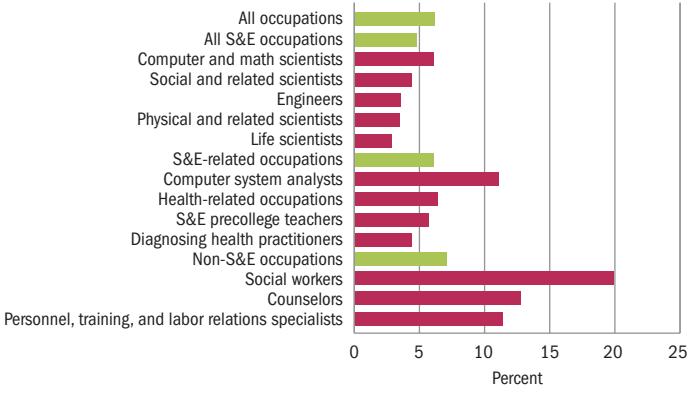
B

Employed women within the science and engineering workforce as a percentage of selected occupations: 2013



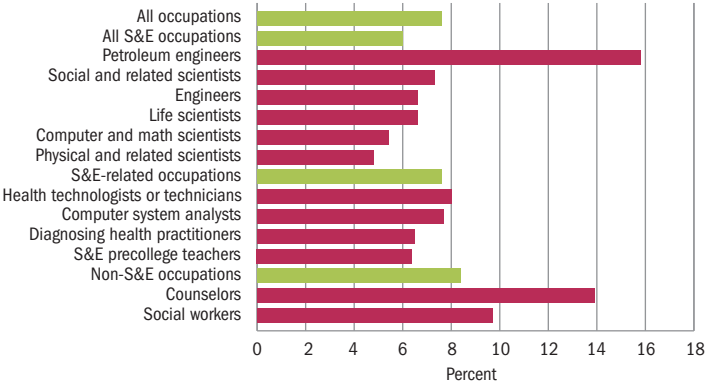
C

Employed blacks within the science and engineering workforce as a percentage of selected occupations: 2013



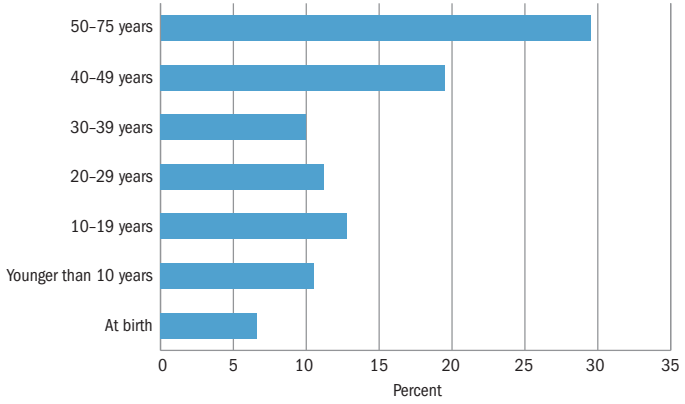
D

Employed Hispanics within the science and engineering workforce as a percentage of selected occupations: 2013



E

Age at onset of disability within the science and engineering workforce: 2013



6 Employment status

Unemployment rates are lower for the science and engineering (S&E) workforce than for the general population. Variations across racial and ethnic groups in the reasons for not working or for working part time reflect differing age distributions of men and women in the S&E workforce as well as differing family responsibilities. Rates of unemployment also vary by disability status.

Unemployment rates

In 2013, unemployment rates tended to be higher for underrepresented minority scientists and engineers than for all scientists and engineers. The unemployment rates by sex and by race or ethnicity were similar between 2010 and 2013, although for white women and Asian men the rate declined slightly in 2013. Among whites and underrepresented minorities, women and men had fairly similar unemployment rates. Among Asians, women were more likely than men to be unemployed (figure A).

Reasons for not working

Scientists and engineers were more likely to cite retirement than other reasons for not working. Asian female scientists and engineers were the one exception and were more likely to cite family responsibilities as a reason for not working. Within each racial and ethnic group, female scientists and engineers who were not working were far more likely than men to cite family responsibilities and less likely than men to cite retirement as a reason for not working. Within each racial and ethnic group, men were more likely than women to cite having been laid off as a reason for not working (figure B).

Part-time employment

In 2013, the part-time employment rate was similar for scientists and engineers and for the general population. The part-time employment rate for scientists and engineers has remained fairly stable in recent years. Female scientists and engineers were more likely than their male counterparts to work part time. White women were the most likely to be employed part time. Asian women and underrepresented minority women had very similar part-time employment rates (figure C).

Reasons for part-time employment

Within each racial and ethnic group of scientists and engineers, women who were employed part time cited family responsibilities more frequently than men did, whereas men cited retirement more frequently than women did. Whites were more likely than members of other racial or ethnic groups to indicate that they worked part time because they did not need or want to work more hours (figure D).

Effect of disability

Employment status

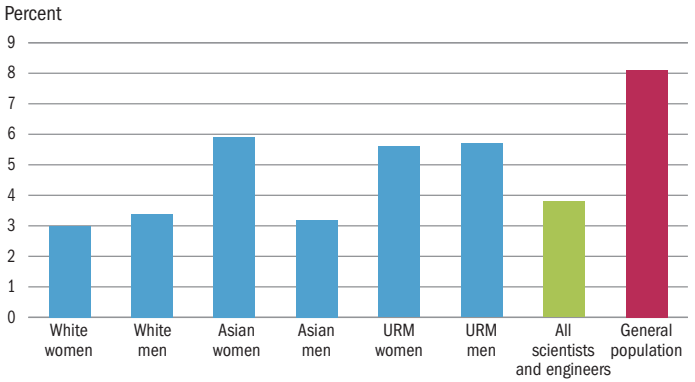
About one in nine scientists and engineers ages 75 and younger has a disability. Scientists and engineers with disabilities are more likely than those without disabilities to be unemployed or out of the labor force (figure E).

Reasons for not working

Retirement was the primary reason for not working among scientists and engineers, regardless of their disability status. But among scientists and engineers with disabilities, chronic illness or permanent disability was also a prevalent reason for not working (figure F).

A

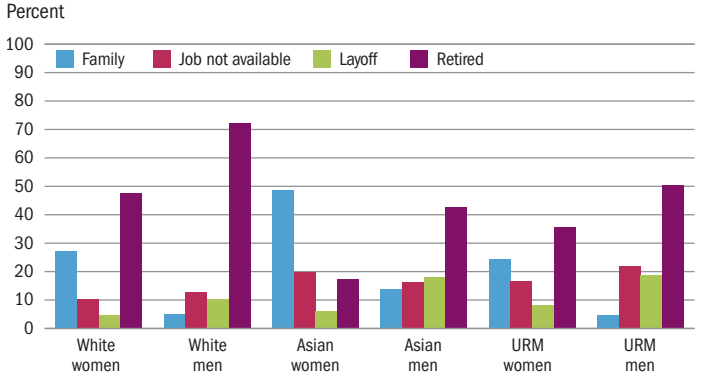
Unemployment rates among scientists and engineers: 2013



URM = underrepresented minority.
NOTE: The general population consists of the U.S. civilian noninstitutional population 16 years and over.

B

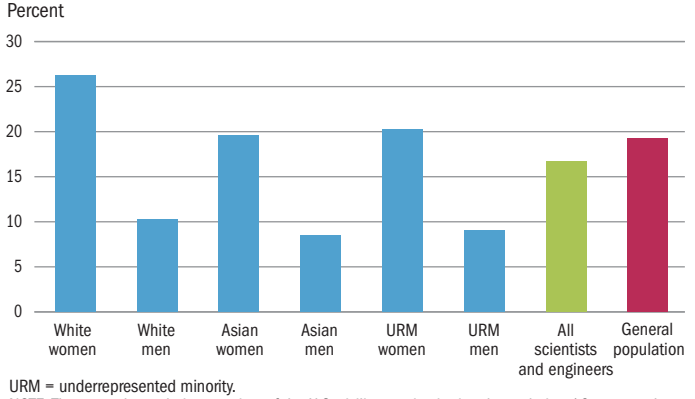
Reasons for not working among scientists and engineers: 2013



URM = underrepresented minority.
NOTE: Not all reasons are shown; respondents could select more than one reason.

C

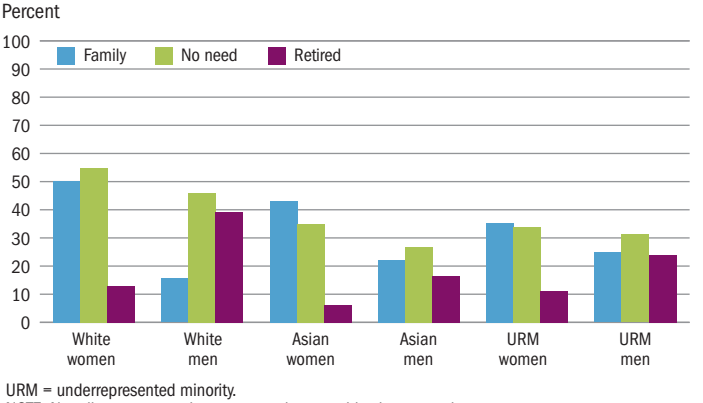
Part-time employment rates among scientists and engineers: 2013



URM = underrepresented minority.
NOTE: The general population consists of the U.S. civilian noninstitutional population 16 years and over.

D

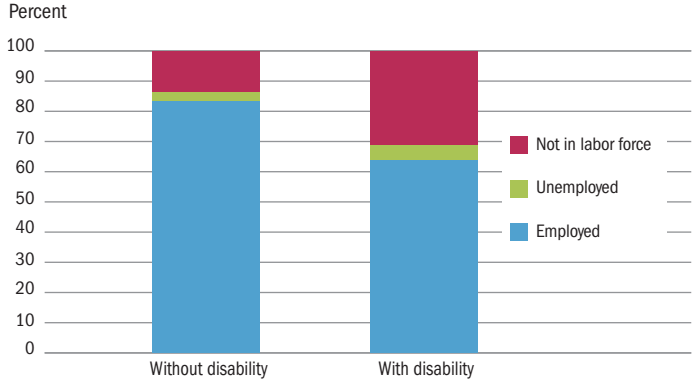
Reasons for part-time employment among scientists and engineers: 2013



URM = underrepresented minority.
NOTE: Not all reasons are shown; respondents could select more than one reason.

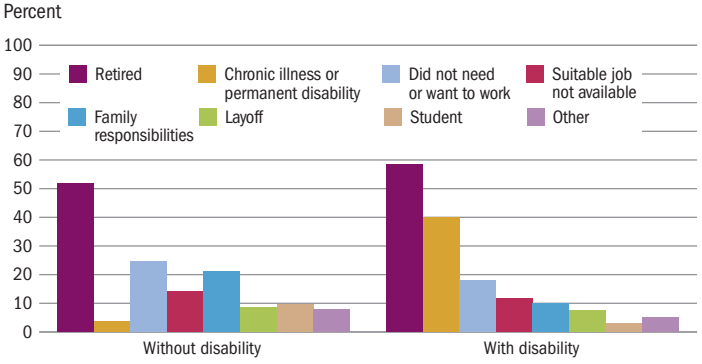
E

Employment status among scientists and engineers, by disability status: 2013



F

Scientists and engineers who are unemployed or out of the labor force, by disability status and reason for not working: 2013



NOTE: Respondents could select more than one reason.

7 Academic employment

In the past 20 years, participation of women in the academic doctoral workforce has increased considerably. Growth in the participation of underrepresented minorities has been slower. Women and underrepresented minorities in academic employment continue to differ from their male, white, and Asian counterparts in rank, tenure, salary, and federal support.

Women in full-time, full professorships

Women's share of full-time, full professorships has more than doubled since 1993. Despite this increase, women currently occupy only about one-fourth of these senior faculty positions. Women's share of full professorships is similar at the nation's most research-intensive academic institutions and at all 4-year colleges and universities (figure A).

Women are more likely to hold full-time associate and assistant professorships than full-time, full professorships, in part because older cohorts of academically employed doctorate holders in science, engineering, and health are disproportionately male.

Underrepresented minorities in professorships and tenure-track positions

The share of full-time, full professorships held by underrepresented minorities is lower than and has risen more slowly than the share held by women (figures A and B). When associate professorships in addition to full professorship are taken into consideration, underrepresented minorities occupied 8% of these senior faculty positions at all 4-year colleges and universities and about 6% of these positions at the nation's most research-intensive institutions. Underrepresented minorities held lower shares of tenured or tenure-track positions than their white and Asian counterparts. Although underrepresented minority women held smaller shares of tenure-track positions than did Asian women, they held about the same share of tenured positions.

Median salaries

Among recently degreed science and engineering doctorate holders with similar years of experience, median salaries for men, women, and most racial and ethnic groups were fairly similar in 4-year academic institutions. A more noticeable difference in median salary was observed between Asian men and Asian women who had received their doctorate prior to 2000 (figure C).

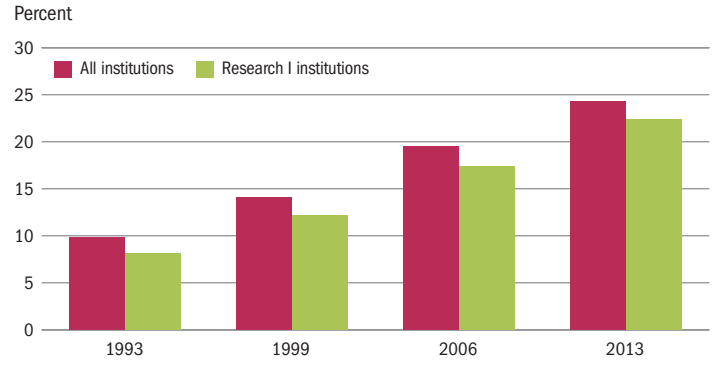
In 2013, median salaries were highest for those with doctorates in computer and information sciences and engineering, fields in which men outnumber women substantially.

Federal grants or contracts

Among science and engineering doctorate holders employed full time as full, associate, or assistant professors in 4-year colleges or universities, underrepresented minorities were less likely than their white and Asian counterparts to be supported by federal grants or contracts in 2013. Overall, a higher share of men (47%) than women (40%) received this support. Similarly, among whites and Asians, men were more likely than women to receive federal grants and contracts. However, in underrepresented minority groups, about the same share of men and women received such support. Of all the groups, Asian men were the most likely to have obtained support (figure D).

A

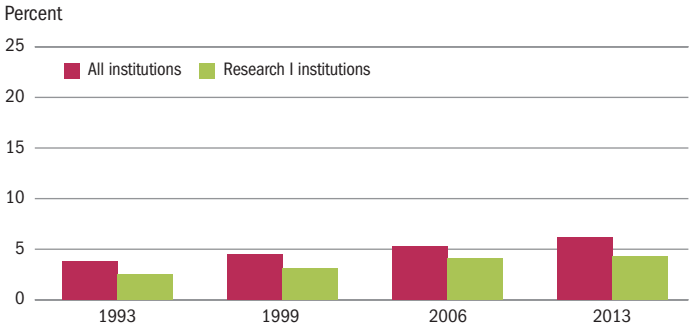
Women as a percentage of full-time, full professors with science, engineering, and health doctorates, by employing institution: 1993–2013



NOTE: Criteria for research I institutions based on 1994 Carnegie classification.

B

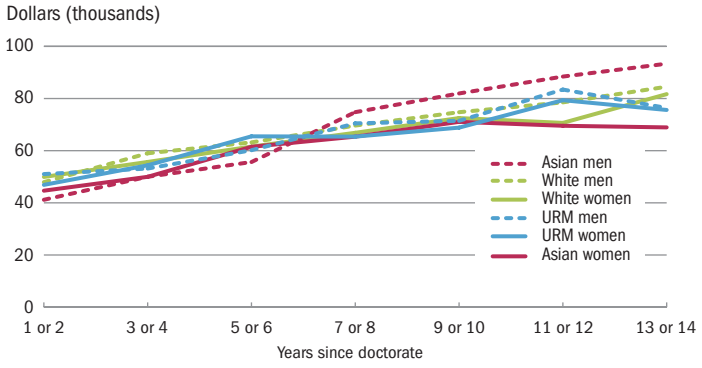
Underrepresented minorities as a percentage of full-time, full professors with science, engineering, and health doctorates, by employing institution: 1993–2013



NOTE: Criteria for research I institutions based on 1994 Carnegie classification.

C

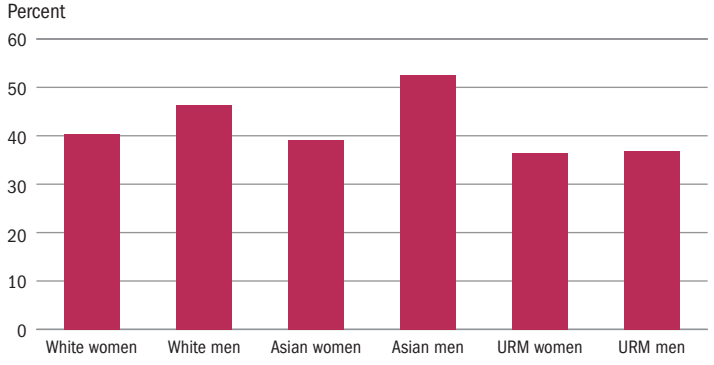
Median salaries of doctoral scientists and engineers employed full time in 4-year institutions, by years since doctorate: 2013



URM = underrepresented minority.

D

Full-time faculty in 4-year institutions who have science, engineering, and health doctorates and receive federal support: 2013



URM = underrepresented minority.

Data sources

The data in this report come from surveys conducted by the National Science Foundation (National Center for Science and Engineering Statistics), the U.S. Department of Education (National Center for Education Statistics), the U.S. Department of Commerce (Census Bureau), and the U.S. Department of Labor (Bureau of Labor Statistics). The technical notes for this report, available online at www.nsf.gov/statistics/wmpd/ , provide information on specific data sources, including the survey population and data collection procedures.

The degree data in this report cover degrees in science and engineering, including the following fields: astronomy, chemistry, physics, atmospheric sciences, earth sciences, ocean sciences, mathematics and statistics, computer sciences, agricultural sciences, biological sciences, psychology, social sciences, and engineering. To present data in a condensed form for this digest, several fields were aggregated in figures and in text. The biological sciences field includes agricultural sciences, and the physical sciences field includes earth, atmospheric, and ocean sciences. Data on degrees include bachelor's, master's, and doctoral degrees and do not include professional degrees, such as the MD or JD.

Racial and ethnic categories reported are generally those mandated by the U.S. Office of Management and Budget (OMB) effective 1 January 2003. OMB specified the following categories of racial and ethnic groups: black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, white, Hispanic or Latino regardless of race, and more than one race reported. Previously, racial and ethnic groups were identified as white, black, Hispanic, Asian or Pacific Islander, and American Indian or Alaska Native.

In this report the racial and ethnic groups described for enrollment and degree data are designated by the old categories because the National Center for Education Statistics collected these data under the previous standards through 2008 and gave schools the option of reporting race and ethnicity under either the old or new categories through 2009 for enrollment data and through 2010 for degree data. Although after these dates it became mandatory to report under the new racial and ethnic categories, institutions were not required to update the race and ethnicity data for individuals who were already in their systems (for more details, see the technical notes for this report). In future editions, this report will conform to OMB's new race and ethnicity reporting standards. For all data from the Integrated Postsecondary Education Data System, Asian includes Pacific Islander. In addition, for all data in this report, American Indian includes Alaska Native.

Degree and enrollment data by race and ethnicity refer to U.S. citizens and permanent residents only, but the proportions discussed in this report are calculated on the total number of students enrolled or earning degrees. Because of insufficient sample size in some surveys, not all groups are reported in all tables or figures.

Glossary

High-Hispanic-enrollment institution. HHEs are academic institutions whose undergraduate, full-time equivalent student enrollment is at least 25% Hispanic. Data are from the Integrated Postsecondary Education Data System Fall 2011 Enrollment Survey conducted by National Center for Education Statistics.

Historically black college or university. HBCUs are academic institutions on a list maintained by the White House Initiative on Historically Black Colleges or Universities. The Higher Education Act of 1965, as amended, defines an HBCU as "...any historically black college or university that was established prior to 1964, whose principal mission was, and is, the education of black Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation." See http://www.ed.gov/edblogs/whhbcu/one-hundred-and-five-historically-black-colleges-and-universities/.

Minority. A minority is a racial or ethnic group that is a small percentage of the U.S. population. Blacks, Hispanics, American Indians or Alaska Natives, Native Hawaiians or Other Pacific Islanders, and Asians are minority groups.

Scientists and engineers. In this report, persons classified as scientists and engineers are residents of the United States who had a baccalaureate degree or higher and were either educated as or are working as a scientist or engineer. A baccalaureate or higher degree is a bachelor's, master's, doctoral, or professional degree.

Tribal college. Tribal colleges are fully accredited academic institutions on a list maintained by the White House Initiative on Tribal Colleges and Universities. These institutions are included in the Tribal Colleges category in the basic classification scheme of the 2010 Carnegie Classification of Institutions of Higher Education. See http://classifications.carnegiefoundation.org/.

Underrepresented minority. This category comprises three racial or ethnic minority groups (blacks, Hispanics, and American Indians or Alaska Native) whose representation in science and engineering is smaller than their representation in the U.S. population.

Key to acronyms

HBCU = historically black college or university

HHE = high-Hispanic-enrollment institution

S&E = science and engineering

URM = underrepresented minority

Online resources

Women, Minorities, and Persons with Disabilities in Science and Engineering online is a dynamic information source with data updated as they become available. A rich set of resources that supplement this digest are available online at http://www.nsf.gov/statistics/wmpd/.

Data tables. Detailed data tables, organized by topic, allow the reader to explore the data in more depth. Data tables are available for download, either as Excel or PDF files.

Figures. Presentation graphics, accompanied by their supporting data in Excel format, are provided for each of the figures that illustrate the topics in this digest.

Technical notes. Technical notes provide information on reporting categories, sources of data, and sampling errors.

Resource links. Links are provided to additional sources of data on these topics from the National Science Foundation (NSF) and to related reports published by NSF, as well as to related reports and data from external sources, such as the National Center for Education Statistics and American Council on Education.

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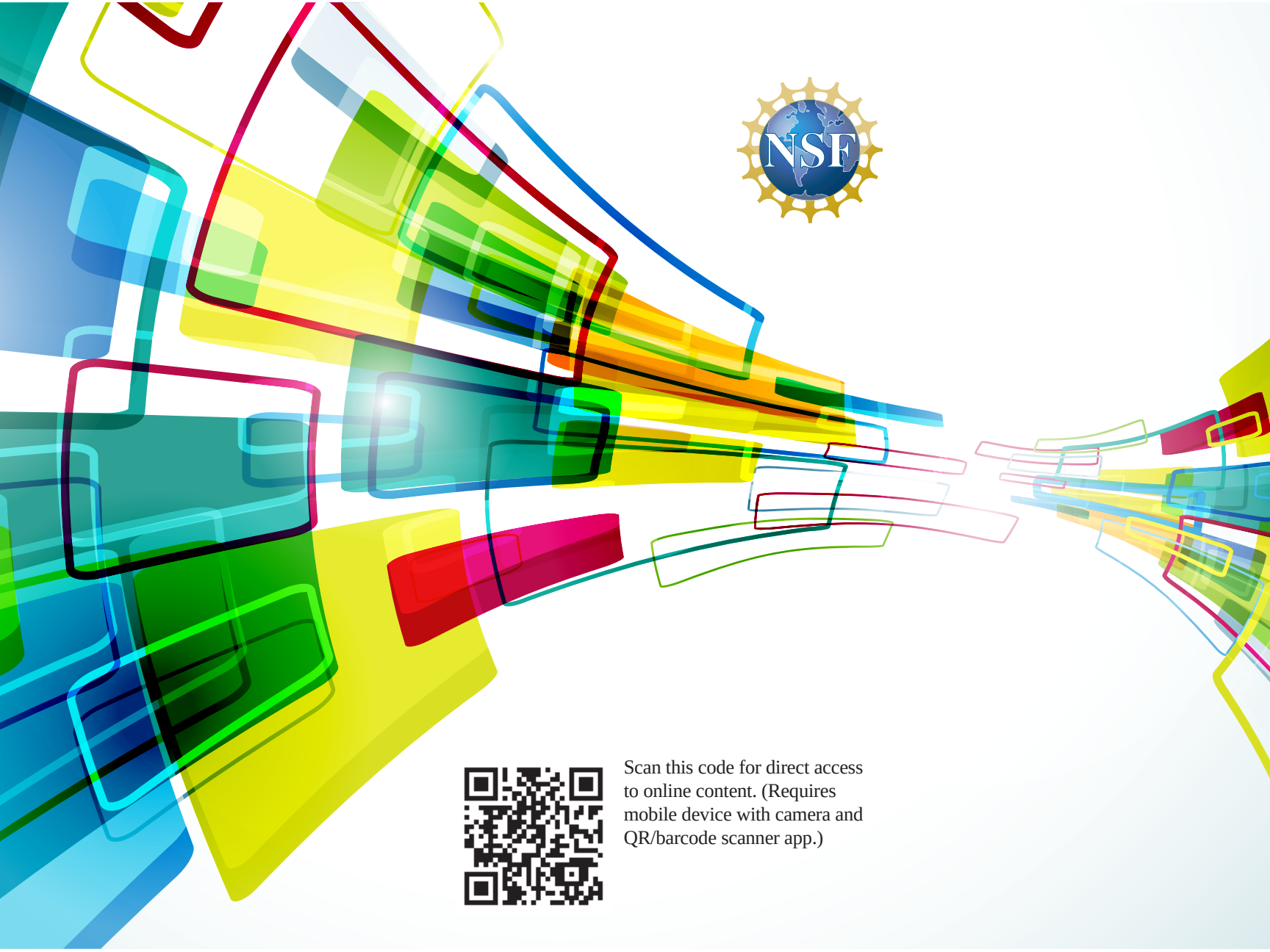
www.nsf.gov/statistics/wmpd/

The complete *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2015* report, including detailed data tables, interactive graphics, technical notes, and other online resources, is available on the Web at www.nsf.gov/statistics/wmpd/.

To obtain printed copies of the *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2015* digest (NSF 15-311), use NSF's online publication request form, http://www.nsf.gov/publications/orderpub.jsp, or call 703-292-7827.



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